[002] This application is a national stage completion of PCT/EP2003/010202 filed September 13, 2003 which claims priority from German Application Serial No. 102 44 025.5 filed September 21, 2002.

[003] FIELD OF THE INVENTION

[004] The invention concerns a measuring device for the measurement of gearing and diameters of rotationally symmetrical components to be measured ~~(hereinafter, "components"), the measuring device being of a type more closely defined in the principal concept of claim 1~~.

[005] BACKGROUND OF THE INVENTION

[009] The stated purpose of the invention is achieved by a generic measurement device ~~conforming to the characterizing features of the principal claim~~ and which the device is applicable to the measurement of gearing and diameters of rotation-symmetrical components.

[010] SUMMARY OF THE INVENTION

[013] BRIEF DESCRIPTION OF THE DRAWINGS

[014] ~~In the following, the invention is more closely described with the aid of Figs. 1 and 2, which show at least one embodiment of the invention. There is shown in.~~ The invention will now be described, by way of example, with reference to the accompanying drawings in which:

[017] DETAILED DESCRIPTION OF THE INVENTION

[018] Fig. 1 shows a component 2 comprising a gear with conical, internal toothing, which gear has been placed upon a measuring table 1. By way of a hand operated crank 3, the measurement table 1 can be raised to its necessary measuring height. This raising done by a lifting apparatus 4 which, in this case, is operated as a scissors-linkage. The linear displacement of the measurement

table 1 can be read from a graduated scale 5 on a measurement dial 6. A horizontal movement of the table can be confined to an optional length by way of limit switches 7. If these limit switches 7 are impinged upon, then a slip clutch 8 is activated, which prevents an overrun of the limit switches 7. The component 2 is prepositioned in an approximate location between a fixed feeler pin 9 and a movable feeler pin 10. The measurement procedure is initiated by the displacement of a lever 12 which moves an eccentric disk 13. A spring actuated mechanism 14 displaces the movable feeler pin 10 with the aid of an apparatus 15 in the form of a linear slide arrangement, by way of which the component 2 is fixed in its position. The measuring force of the spring actuated mechanism 14 can be steplessly adjusted via a screw 16.

[019] Fig. 2 shows the component 2 on the measurement table 1 where said component lies in its preposition between the fixed feeler pin 9 and the movable feeler pin 10. The prepositioning is eased by a friction diminishing aid 11, in this case, depicted as a roller framing, which framing is integrated into the surface of the measuring table 1. By the displacement of a lever 12, the actual measurement procedure is initiated. The spring activated mechanism 14 is caused to function via the eccentric disk 13 which, with the aid of spring force, places the movable feeler pin 10 in its measuring position. The spring force can be applied in a stepless manner by way of a threaded arrangement and, if necessary, can be corrected. The movable feeler pin 10 extends itself outward and brings the component 2 into its measurement position. Because of its active measuring path, the movable feeler pin 10 can also circumscribe the inside contour and examine the inner gearing of the of the component 2. For this purpose, the movable measurement feeler pin 10 is brought into its upward position by a renewed displacement of the lever 12. The measurement table 2, with the aid of the lifting apparatus 3, is placed in a respectively different measuring position by the crank 3. The measurement procedure can be reactivated many times by repeated adjustment of the lever 12 which activates the positioning and the elevation of the movable feeling pin 10.